UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,122	10/13/2000	Alessandra Boe	P/717-181(CONT)	6984

1444 7590 05/05/2003

BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

EXAMINER
MURPHY, JOSEPH F

ART UNIT	PAPER NUMBER
1646	14

DATE MAILED: 05/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/687,122	BOE ET AL.	
	Examiner	Art Unit	
	Joseph F Murphy	1646	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-29* is/are pending in the application.

4a) Of the above claim(s) *22-24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21 and 25-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Formal Matters

Claims 1-20 were cancelled and claim 21 was amended in Paper No. 2/13/2003. Claims 21-29 are pending. Claims 22-24 stand withdrawn from consideration pursuant to 37 CFR 1.142(b). Claims 21, 25-29 are under consideration.

Terminal Disclaimer

The terminal disclaimer filed on 2/13/2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,225,300 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Response to Amendment and Arguments

The rejection of claims 21, 25-29 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-4, 5 of U.S. Patent No. 6,225,300 (Boe et al.) in view of U.S. Patent No. 5,691,320 (von Borstel et al.), has been obviated by the filing of the Terminal Disclaimer, and the rejection is withdrawn.

The rejection of claims 21, 25-29 are rejected under 35 U.S.C. 112, first paragraph, because the specification is overly broad in the recitation of "TNF receptor" and "TBP-1" has been withdrawn based on Applicant's arguments.

The rejection of claims 21, 25-29 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, has been obviated by Applicant's amendment, and is thus withdrawn.

The rejection of claims 21, 25-29 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, has been obviated by Applicant's amendment, and is thus withdrawn.

Claim Rejections - 35 USC § 112 first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21, 25-29 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method of treating septic shock by administration of a TNF receptor, or TBP-1 in combination with DHEA, does not reasonably provide enablement for a method of treating autoimmune and inflammatory diseases by administration of a TNF receptor, or TBP-1 in combination with DHEA. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

The factors to be considered have been summarized as the quantity of experimentation necessary, the amount of direction or guidance presented, the presence or absence of working examples, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability or unpredictability of the art and the breadth of the claims. *Ex Parte Forman,* (230 USPQ 546 (Bd Pat. App. & Int. 1986)); *In re Wands,* 858 F.2d 731, 8 USPQ 2d 1400 (Fed. Cir. 1988).

In the instant case, claim 21 is directed to a method of treatment of autoimmune and inflammatory disease in a patient by administration of DHEA in combination with a TNF receptor, while claims 25-29 are directed to methods of treatment of autoimmune and inflammatory diseases in a patient by administration of DHEA in combination with TBP-1. Thus, the claim encompass the treatment of any and all inflammatory and autoimmune diseases by administration of a TNF receptor, including TBP-1, in combination with DHEA. The specification provides an example wherein when tested in the murine septic shock model, administration of TBP-1 in combination with DHEA protects 90-100% of the tested mice from death (Specification, page 8, lines 25-35). However, no teachings are provided that would allow one of skill in the art to predict that this method would be efficacious inflammatory diseases other than septic shock, or in autoimmune diseases. No nexus is provided between the murine septic shock model and any other inflammatory or autoimmune diseases. U.S. Patent No. 6,054,487(Sekut et al. 2000) teaches that while the LPS model can be used to test the efficacy of therapeutic regimens for the treatment of septic shock, separate models are required to test the efficacy of the claimed treatments for efficacy in other inflammatory, or autoimmune diseases (column 20, lines 20-35). The '487 patent teaches that art recognized animal models for treatment of autoimmune diseases include experimental colitis, experimental allergic encephalomyelitis and collagen induced arthritis. Furthermore, the art recognizes that there are distinct disease processes involved in septic shock, other types of inflammation, and autoimmune diseases. Ulevich et al. (Ulevitch RJ, Tobias PS. Receptor-dependent mechanisms of cell stimulation by bacterial endotoxin. Annu Rev Immunol. 1995;13:437-57) teaches that the mechanism of septic shock is the binding of LPS by LPS Binding Protein (LBP) and the binding

of LPS-LBP complex by CD14 (Ulevitch et al. at 438). The mechanism underlying the development of autoimmune and anutoimmune inflammatory diseases is set forth in The Merck Manual (The Merck Manual of Diagnosis and Therapy, Beers and Berkow, eds. Merck Research Laboratories, Whitehouse Station, N.J. 1999) which teaches that autoimmune disorders are the result of the immune system producing autoantibodies to an endogenous antigen with consequent injury to tissues. Mechanisms for the development of an immune response to autoantigens include, *inter alia*, the release of hidden or sequestered antigens into the circulation, the alteration of self-antigens into an immunogenic form, cross-reaction of a forging antigen with a self-antigen (Merck Manual, page 1061). Thus, as can be seen from the art, there is not a nexus between the LPS model of septic shock and other inflammatory and autoimmune diseases. Therefore, one of skill in the art would not be able to predict that inflammatory diseases other than septic shock, and autoimmune diseases, would be treated by administration of DHEA in combination with a TNF receptor, including TBP-1.

Conclusion

Claims 21, 25-29 are rejected.

Advisory Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph F. Murphy whose telephone number is 703-305-7245. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 703-308-6564. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-308-0294 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Joseph F. Murphy, Ph. D.
Patent Examiner
Art Unit 1646
May 1, 2003

YVONNE EYLER, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600